

Historic, Archive Document

Do not assume content reflects current scientific knowledge, policies, or practices.

Ag 84 Pro

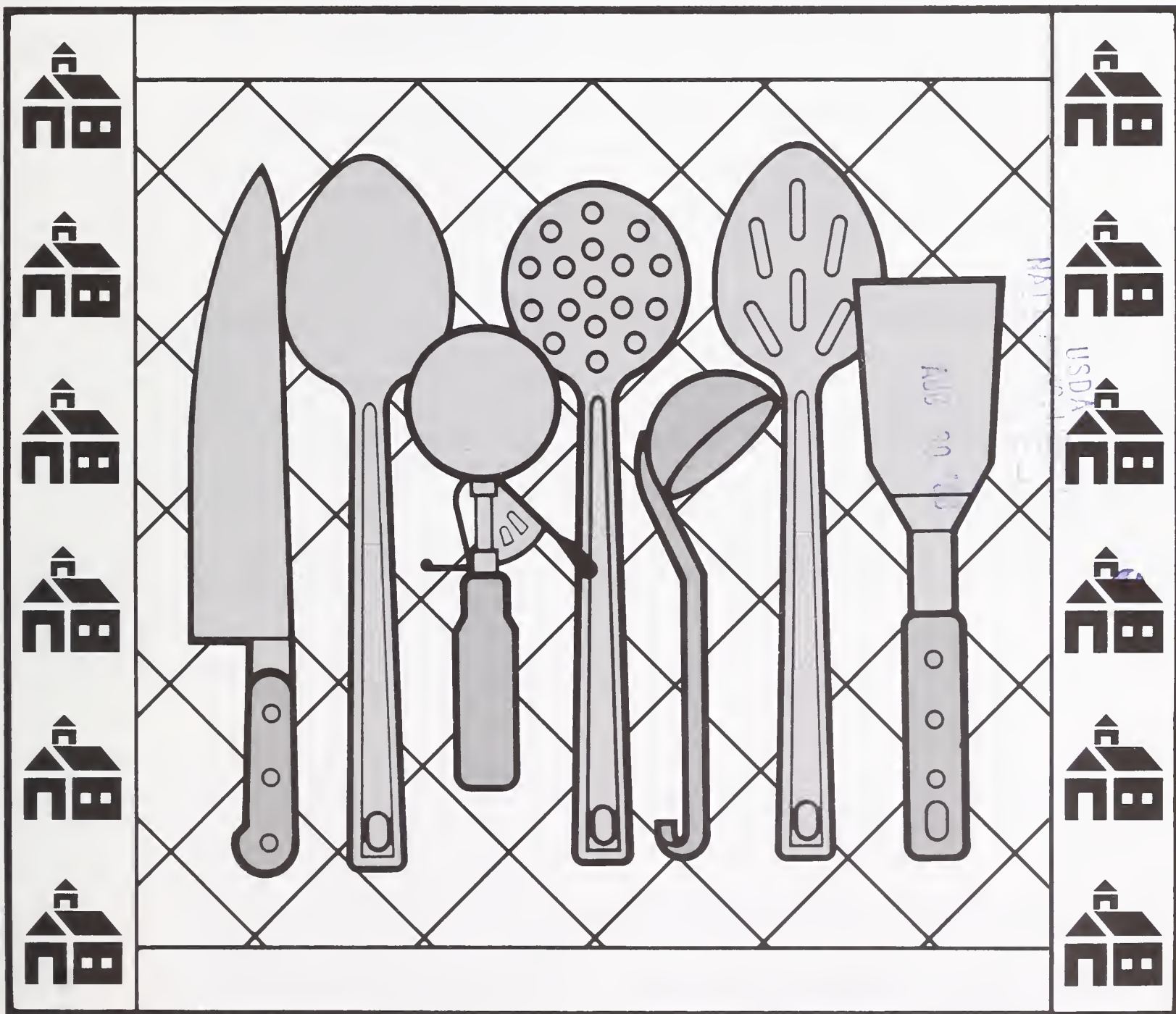


United States
Department of
Agriculture

Food and
Nutrition
Service

Program Aid
Number 1397

Guide to Using:
**Quantity Recipes for
School Food Service**
(Program Aid No.1371)



Purpose

This publication is intended to help school food service professionals train their employees in using the new USDA *Quantity Recipes for School Food Service*, Program Aid No. 1371.

Prepared by
Nutrition and Technical Services Division

Anita McCoy Manka was the principal author of this publication.

Contents

	Page
Background	3
Advantages of Using USDA Recipes	3
Adjusting Recipes for Local Use	4
Care of the Recipes	4
Organization of the File	4
Tables of Contents	4
General Information Pages	7
Instruction Pages	8
Recipe Format	
Recipe Name	8
Meal Pattern Contribution	9
Ingredients	10
Alternative Ingredients	10
Optional Ingredients	10
Weights and Measures for 50 and 100 Servings	12
Measures by Weight and Volume	12
For____Servings	12
Directions	12
Serving	14
Yield	14
Nutrients Per Serving	14
Variations	14
Marketing Guide for Selected Items	16
We Thought You Would Like To Know (Questions and Answers)	16
How the Recipes Were Developed and Standardized	18
Recipe Acceptability	19

The National School Lunch and Breakfast Programs are available to all children regardless of race, color, national origin, sex, age, or handicap.

October 1987

Background

The National School Lunch Act of 1946 established the National School Lunch Program (NSLP) to “safeguard the health and well-being of the Nation’s children and to encourage the domestic consumption of nutritious agricultural commodities and other food....” Congress designed the NSLP to (1) provide nutritious, reasonably priced lunches to school children, (2) contribute to a better understanding of good nutrition, and (3) foster good food habits.

School food service is a unique and important market for U.S. agricultural products. It reflects advances in knowledge of food, nutrition, and food service management and is full of opportunities to try new ideas. It presents an exciting challenge to maintain and improve the quality of school meals.

The Food and Nutrition Service (FNS) is the agency of the U.S. Department of Agriculture (USDA) charged with administering the NSLP. FNS currently has three publications to help school food service managers plan, purchase, prepare, and serve school lunches that please students and meet the school lunch meal pattern requirements:

Menu Planning Guide for School Food Service, Program Aid No. 1260, helps to plan menus that are acceptable to students.

Food Buying Guide for Child Nutrition Programs, Program Aid No. 1331, helps to calculate the amount of food to purchase and serve.

Quantity Recipes for School Food Service, Program Aid No. 1371, contains standardized recipes that provide a stated contribution to the meal pattern requirements and incorporate USDA-donated commodity foods. This publication replaces *Quantity Recipes for Type A School Lunches*, PA-631, last published in 1971.

These standardized recipes are the result of an extensive development and testing program. They give the specific amounts of each ingredient and the method of preparation needed to produce a consistent, high-quality product with predictable yield. In addition, they incorporate USDA-donated commodities and most are formulated to meet school lunch meal pattern requirements. The recipes can be used in all school food service systems with production capabilities, but they are especially useful for “on-site” production kitchens.

Advantages of Using USDA Recipes

The revised recipes have been developed especially for school lunch programs. They were created with your special concerns in mind. Meal pattern requirements, tight budgets, limited preparation and serving periods, and changing student expectations challenge school food service professionals daily. To help meet the challenge, the recipes incorporate USDA-donated commodity foods in a way that will satisfy student appetites and, at the same time, be easy for cooks to use.

Standardized recipes with standard weights and measures offer many advantages for institutional food preparation. “Trial and error” is too risky for today’s school lunch programs. Students demand consistently high quality foods. Controlling program costs is essential. Using a standardized recipe and avoiding “a pinch of this and a pinch of that” will put you on the road to success. The revised USDA school lunch recipes:

- incorporate current school lunch meal pattern regulations
- provide specified credit toward meeting meal pattern requirements *if* prepared and portioned according to directions
- base recipe crediting on current yield data from the *Food Buying Guide for Child Nutrition Programs*
- result in consistently high quality food products that have been thoroughly tested and evaluated
- use only moderate levels of added sugar, fat, and salt
- ensure predictable yield so that you can plan and produce the exact amount of food you need
- make practical use of USDA-donated commodities
- minimize the need for supervision because detailed step-by-step instructions allow employees to work more independently
- encourage employee self-confidence in knowing what to do, how to do it, and when to do it
- help you control program costs through better management of purchasing and storage, based on recipes specifying exact amounts of ingredients.

Ingredient amounts and preparation methods are the result of an extensive testing program. Follow the directions for the sequence of adding ingredients, mixing times, mixing speeds, and the cooking times and temperatures. The result will be appetizing foods that you will be proud to serve.

Adjusting Recipes for Local Use

The food service director at the local level can adapt the recipes to meet local needs. For example, adjustments may need to be made to fit particular equipment available. Levels of seasonings may need to be adjusted for students' tastes. Portion size may need to be adjusted to complement other menu items as well as the meal pattern age/grade groups being served.

Optional ingredients, seasonings, and garnishes do not contribute toward meeting meal pattern requirements. Therefore, optional ingredients can be deleted or adjusted without affecting meal pattern credit. Optional ingredients are included to help merchandise foods by improving appearance, taste, and regional acceptance.

CAUTION is needed if creditable ingredients and/or portion sizes are changed from those stated on the USDA standardized recipes, since such changes affect credit toward meal patterns. CREDIT TOWARD MEETING MEAL PATTERN REQUIREMENTS IS BUILT INTO MOST OF THE RECIPES AND IS BASED ON THE PORTION SIZE AS STATED IN THE RECIPE.

Care of the Recipes

The life of the recipe pages can be prolonged if they are inserted into protective plastic covers when in use. *Quantity Recipes for School Food Service* must be kept secure, cared for, and remain the property of the school in which it is being used.

For your convenience, the recipes are punched for a three-ring binder. However, the tab divider pages are printed on both sides so they can be read if placed in a file drawer.

Organization of the File

The recipe file is separated by tab divider pages into nine sections:

A—General Information
B—Bread and Cereal Products
C—Desserts
D—Main Dishes
E—Salads and Salad Dressings
F—Sandwiches
G—Sauces, Gravies, and Seasoning Mixes
H—Soups
I—Vegetables

The pages are identified by a letter and number in the upper right-hand corner. Pages are numbered consecutively within each section.

For example: Instruction pages and recipes in the "Bread and Cereal Products" section are assigned the letter "B." "Baking Powder Biscuits" is numbered B-4, which means that it is the fourth item in section B.

Tables of Contents

Each tab divider page, separating one section from another, has a list of what is contained in that section. To find the recipe you want, select the appropriate menu category, such as "B-Bread and Cereal Products," "D-Main Dishes," etc., printed on the tab dividers. Then look through the table of contents on that page. Recipes are listed alphabetically under headings by recipe name or by easily identifiable common food items.

For example: Biscuits; Breads, Quick; Breads, Yeast; Muffins; Rice; etc., are common food item headings in the "Bread and Cereal Products" section of the file. All biscuit recipes contained in the file are alphabetized under the "Biscuit" heading: ➡

Bread and Cereal Products

Contents

Instruction Pages		Page
Using Master Mix for Baked Products .	B-1	
Cooking Macaroni, Noodles, and Spaghetti	B-2	
Cooking Rice (Oven or Steamer)	B-3	
Recipes		Page
Biscuits		
Baking Powder Biscuits	B-4	
Baking Powder Biscuits (Using Master Mix)	B-4a	
Cheese Biscuits	B-4b	
Drop Biscuits	B-4c	
Wheat Biscuits	B-4d	
Breads, Quick		
Banana Bread Squares	B-5	
Banana Bread Squares (Using Master Mix)	B-5a	
Brown Bread	B-7	
Cornbread	B-9	
Sweet Potato-Prune Bread Squares .	B-18	
Bread, Yeast		
Italian Bread	B-11	
Oat Bread	B-19a	
Oat Bread With Honey	B-19b	
Raisin Bread	B-19c	
Wheat Bread	B-19d	
Wheat Bread With Honey	B-19e	
White Bread	B-19	
Recipes		Page
Master Mix for Baked Products	B-1	
Muffin Squares	B-12	
Muffin Squares (Using Master Mix) .	B-12a	
Wheat Muffin Squares	B-12b	
Pancakes	B-13	
Pancakes (Using Master Mix)	B-13a	
Pizza Crust	B-14	
Pourable Pizza Crust	B-15	
Rice		
Fried Rice	B-10	
Spanish Rice	B-17	
Rolls (Yeast)	B-16	
Cinnamon Rolls	B-8	
Frankfurter Rolls	B-16a	
Hamburger Rolls	B-16b	
Wheat Rolls	B-16c	
Stuffing		
Bread Stuffing	B-6	
Cornbread Stuffing	B-6a	

Baking Powder Biscuits

Bread

Bread and Cereal Products B-4

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
All-purpose flour	3 lb	2¾ qt	6 lb	5½ qt	1. Blend flour, dry milk, baking powder, and salt in mixer for 1 minute at low speed.
Noninstant, nonfat dry milk	3 oz	½ cup 2 Tbsp	6 oz	1¼ cups .....	.....
OR	OR	OR	OR	OR	.....
Instant nonfat dry milk ...	3 oz	1¼ cups	6 oz	2½ cups .....	.....
Baking powder	2¾ oz	¼ cup 3 Tbsp	5½ oz	¾ cup 2 Tbsp	.....
Salt	1 Tbsp	2 Tbsp	2. Add shortening and blend into dry ingredients for 2 minutes at low speed. Mixture will be crumbly.
Shortening	11½ oz	1¾ cups	1 lb 6½ oz .	3½ cups .....	.....
Cold water .....	.....	3¾ cups .....	.....	1 qt 3½ cups .	.....
.....	
.....	
.....	4. Turn out onto lightly floured surface. For 50 servings, knead ball of dough lightly for 1 minute. For 100 servings, divide dough in half and knead each half lightly for 1 minute.
.....	5. Roll or pat out each ball of dough to ½" thickness. Cut with floured 2½" biscuit cutter and place on sheet pan (18"x26"x1") in rows of 10 down and 5 across. For 50 servings, use 1 sheet pan. For 100 servings, use 2 sheet pans.
.....	6. Bake until lightly browned: Conventional oven: 450 °F for 12-14 minutes Convection oven: 400 °F for 8-10 minutes

SERVING: 1 biscuit provides 1½ servings of bread.

YIELD: 50 servings: 50 2½-inch biscuits
100 servings: 100 2½-inch biscuits

(Continued on back)

Baking Powder Biscuits (Continued)

Bread and Cereal Products B-4

Variations

a. Baking Powder Biscuits (Using Master Mix)

50 servings: Omit steps 1 and 2. Use 3 lb 12 oz (3 qt) Master Mix. Continue with steps 3-6.

100 servings: Omit steps 1 and 2. Use 7 lb 8 oz (6 qt) Master Mix. Continue with steps 3-6.

b. Cheese Biscuits

50 servings: Follow steps 1 and 2. In step 3, add 12 oz (¾ cup) shredded cheddar cheese to soft dough. Mix lightly to distribute cheese. Continue with steps 4-6.

100 servings: Follow steps 1 and 2. In step 3, add 1 lb 8 oz (1¾ qt) shredded cheddar cheese to soft dough. Mix lightly to distribute cheese. Continue with steps 4-6.

c. Drop Biscuits

50 servings: Follow steps 1 and 2. In step 3, use 1 qt ¾ cup cold water. Omit step 4. In step 5, portion with level No. 16 scoop (¼ cup) onto 1 sheet pan (18"x26"x1") in rows of 10 down and 5 across. Continue with step 6.

100 servings: Follow steps 1 and 2. In step 3, use 2 qt 1½ cups cold water. Omit step 4. In step 5, portion with level No. 16 scoop (¼ cup) onto 2 sheet pans (18"x26"x1") in rows of 10 down and 5 across. Continue with step 6.

d. Wheat Biscuits

50 servings: In step 1, use 2 lb 4 oz (2 qt) all-purpose flour and 12 oz (¾ cup) whole-wheat flour. Continue with steps 2-6.

100 servings: In step 1, use 4 lb 8 oz (4 qt) all-purpose flour and 1 lb 8 oz (1 qt ¾ cup) whole-wheat flour. Continue with steps 2-6.

Nutrients Per Serving

Calories	164	Vitamin A	0 RE/1 IU	Iron	0.8 mg
Protein	3 g	Vitamin C	0.1 mg	Calcium	57 mg
Carbohydrate	22 g	Thiamin	0.17 mg	Phosphorus	86 mg
Fat	7 g	Riboflavin	0.12 mg	Potassium	59 mg
Cholesterol	Tr	Niacin	1.45 mg	Sodium	322 mg

General Information

Contents

	Page		Page		Page
Introduction	A-1	Weighing and Measuring Ingredients ..	A-7	Nonfat Dry Milk (Noninstant and Instant)	A-14
School Lunch Patterns	A-2	Substitution of Ingredients in Recipes .	A-8	Shell Eggs	A-15
What This Publication Includes	A-3	Can Sizes (Common Weights and Measures)	A-9	Dried Eggs (Storing, Preparing, and Using)	A-16
Nutritive Value of a Serving of Food ..	A-4	Recipe Adjustment—Method 1 (Factor Method)	A-10	Frozen Eggs (Storing, Thawing, and Using)	A-17
Keeping Food Safe to Eat	A-5	Decimal Equivalents for Fractions (of 1 Pound, 1 Cup, or 1 Gallon)	A-11	Steamtable Pan Capacity	A-18
Cooking Terms and Abbreviations	A-6	Common Measures	A-12	Portioning Diagrams	A-19
		Recipe Adjustment—Method 2 (Conversion Chart)	A-13	Portion Control	A-20
				Garnishing Techniques	A-21

General Information Pages

Section A, "General Information," contains basic information useful in quantity cooking. The General Information section has been updated, expanded, and made simpler to use.

← The basic biscuit recipe is B-4, "Baking Powder Biscuits." The other four recipes, B-4a, B-4b, B-4c, and B-4d, are variations of the basic recipe and are located after it.

Using Master Mix for Baked Products

Bread and Cereal Products B-1

Master Mix is a mixture of dry ingredients and shortening blended in advance for use in baked products without yeast, such as quick breads and pancakes.

Use Master Mix to save preparation time. Prepare mix according to the recipe on the back of this page in batches larger than are needed at one time. Store the mix and use later, as needed, in a variety of baked products.

In this publication, there are four recipe variations using Master Mix: Baking Powder Biscuits (B-4a), Banana Bread Squares (B-5a), Muffin Squares (B-12a) and Pancakes (B-13a). These are variations of base recipes for the same product. The amounts of flour, milk, baking powder, salt, and shortening in the Master Mix are approximately the same as in the base recipe.

To use Master Mix, weigh or measure the amount of mix specified in the recipe variation. Do not pack or sift. Measure mix lightly and level off with a spatula or the straight edge of a knife. Add remaining ingredients and bake according to recipe directions.

Baked Product	Approximate Number of Servings from 12 Quarts of Master Mix	Approximate Number of Servings from 36 Quarts of Master Mix
Banana Bread Squares	300	900
Baking Powder Biscuits	200	600
Muffin Squares	300	900
Pancakes	266	800

When determining the amount (how many batches) of Master Mix to prepare, consider storage space available, equipment capacity, and the frequency with which the baked items are prepared.

Store the prepared Master Mix in a large, clean container with a tight-fitting lid. For best results, store Master Mix in refrigerator and use within 3 months.

Using Master Mix for Baked Products (Continued)

Bread and Cereal Products B-1

Ingredients	12 Quarts		36 Quarts		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
All-purpose flour	10 lb 8 oz ..	9½ qt	31 lb 8 oz ..	28 qt	1. Place flour, baking powder, salt, cream of tartar, and dry milk in mixer. Blend for 3 minutes on low speed.
Baking powder	9¾ oz	1½ cups	1 lb 13½ oz ..	1 qt ¾ cup ..	.....
Salt	2½ oz	¼ cup	7½ oz	¾ cup .....	.....
Cream of tartar	3 Tbsp	4½ oz	½ cup 1 Tbsp	2. Add shortening to dry ingredients and mix for 5 minutes on low speed, or until evenly distributed. Mixture will be crumbly.
Noninstant, nonfat dry milk	12 oz	2½ cups	2 lb 4 oz	1 qt ¾ cups ..	.....
OR	OR	OR	OR	OR .....	.....
Instant nonfat dry milk	12 oz	1¼ qt	2 lb 4 oz	3¾ qt	3. Use Master Mix in Banana Bread Squares recipe (see B-5a), Muffin Squares recipe (see B-12a), Baking Powder Biscuits recipe (see B-4a), and Pancakes recipe (see B-13a).
OR	OR	OR	OR	OR .....	.....
Shortening	2 lb 10 oz ..	1 qt 2¼ cups ..	7 lb 14 oz ..	1 gal 3 cups ..	.....

YIELD: 12 quarts: 14 lb 12 oz
36 quarts: 44 lb 4 oz

NOTE: A 20-qt mixer may be used to produce 12 qt of Master Mix.
A 60-qt mixer may be used to produce 36 qt of Master Mix.

Instruction Pages

Most of the recipe sections begin with instruction pages, which are listed in the left-hand column of the table of contents for each section. These pages contain important food preparation information and may include basic recipes useful in preparing other recipes found in that section.

For example, in the Bread and Cereal Products section, instruction page B-1 is "Master Mix for Baked Products." You will find not only a recipe for making a Master Mix, but also other information about its use and storage.

Recipe Format

Recipe Name

The recipe name is generally a brief, simple, factual title indicating the major ingredient(s) and/or general method of preparation, such as "Oven Fried Chicken," "Baked Beans," "Banana Bread Squares," or "Nachos With Ground Beef." In some cases a traditional, readily understood name is used, such as "Chicken à la King," "Salisbury Steak," or "Meat Loaf." Fanciful names such as Sunrise Salad, Surprise Casserole, or Macho Nachos are *not* used because such names do not mean the same thing to everyone.

SCHOOL LUNCH PATTERNS

General Information A-2
FOR VARIOUS
AGE/GRADE GROUPS

U.S. Department of Agriculture, National School Lunch Program
USDA recommends, but does not require, that portions be adjusted by age/grade group to better meet the food and nutritional needs of children according to their ages. If portions are adjusted, Groups I-IV are minimum requirements for the age/grade groups specified. If portions are not adjusted, the Group IV portions are the portions to serve all children.

Food Components

Food Items

MEAT OR MEAT ALTERNATE

(quantity of the edible portion as served)

A serving of one of the following or a combination to give an equivalent quantity:

- Lean meat, poultry, or fish
- Cheese
- Large egg(s)
- Cooked dry beans or peas
- Peanut butter or other nut or seed butters
- Peanuts, soy nuts, tree nuts, or seeds, as listed in program guidance, meet no more than 50% of the requirement and must be combined in the meal with at least 50% of other meat or meat alternates. (1 oz of nuts/seeds = 1 oz of cooked lean meat, poultry, or fish.)

VEGETABLE OR FRUIT

2 or more servings of vegetables or fruits or both to total

BREAD OR BREAD ALTERNATE

Servings of bread or bread alternate
Must be enriched or whole-grain
A serving is a slice of bread or an equivalent serving of biscuits, rolls, etc., or 1/2 cup of cooked rice, macaroni, noodles, other pasta products or cereal grains, or a combination of any of the above.

MILK (as a beverage)

Fluid whole milk and fluid unflavored lowfat milk, skim milk, or buttermilk must be offered

	Minimum Quantities				Recommended Quantities	Specific Requirements
	Preschool		Grades K-3	Grades 4-12		
	ages 1-2 (Group I)	ages 3-4 (Group II)	ages 5-8 (Group III)	ages 9 and over (Group IV)	Grades 7-12	
					age 12 and over (Group V)	
	1 oz	1 1/2 oz	1 1/2 oz	2 oz	3 oz	• Must be served in the main dish or the main dish and only one other menu item
	1 oz	1 1/2 oz	1 1/2 oz	2 oz	3 oz	• Vegetable protein products, cheese alternate products, and enriched macaroni with fortified protein may be used to meet part of the meat or meat alternate requirement. Food and Nutrition Service fact sheets on each of these alternate foods give detailed instructions for use
	1/2	3/4	3/4	1	1 1/2	
	1/4 cup	3/8 cup	3/8 cup	1/2 cup	3/4 cup	
	2 Tbsp	3 Tbsp	3 Tbsp	4 Tbsp	6 Tbsp	
	1/2 oz = 50%	3/4 oz = 50%	3/4 oz = 50%	1 oz = 50%	1 1/2 oz = 50%	
	1/2 cup	1/2 cup	1/2 cup	3/4 cup	3/4 cup	• No more than one-half of the total requirement may be met with 1/2 strength fruit or vegetable juice
						• Cooked dry beans or peas may be used as a meat alternate or as a vegetable, but not as both in the same meal
	5 per week	8 per week	8 per week	8 per week	10 per week	• Enriched macaroni with fortified protein may be used as a meat alternate or as a bread alternate, but not as both in the same meal
	minimum of 1/2 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	minimum of 1 serving per day	NOTE: Food Buying Guide for Child Nutrition Programs, Program Aid No. 1331 (1984), provides the information for the minimum weight of a serving
	3/4 cup (6 fl oz)	3/4 cup (6 fl oz)	1/2 pint (8 fl oz)	1/2 pint (8 fl oz)	1/2 pint (8 fl oz)	

Meal Pattern Contribution

Most of the recipes have been developed to provide a specified contribution to the school lunch meal pattern requirements for a stated serving size. (General Information page A-2, "School Lunch Meal Patterns," is a chart of the requirements and recommendations for various age/grade groups.) This

information can be helpful when planning menus. When a recipe contains foods that contribute toward the school lunch meal pattern, the components (Meat/Meat Alternate, Vegetable/Fruit, or Bread/Bread Alternate) are shown in the upper left-hand corner of the recipe. (See recipe on next page.)

Vegetable Soup

Vegetable

Soups H-4

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
Chicken or beef stock	1 gal 3½ qt	3¾ gal	1. Combine stock, tomatoes, celery, onions, pepper, parsley flakes, and garlic powder. Bring to boil.
Canned tomatoes, with liquid, chopped	6 lb 6 oz . .	1 No. 10 can .	12 lb 12 oz .	2 No. 10 cans	.....
*Fresh celery, chopped . . .	10 oz	2½ cups	1 lb 4 oz . .	1 qt ¾ cup . . .	.....
Dehydrated onions	3 oz	¾ cup 2 Tbsp	6 oz	1¾ cups . . . . .	.....
OR	OR	OR	OR	OR	.....
*Fresh onions, chopped . . .	1 lb	2¾ cups	2 lb	1 qt 1¼ cups	2. Reduce heat and cover. Simmer for 20 minutes.
Black pepper . . . . .	.....	1 tsp . . . . .	.....	2 tsp . . . . .	.....
Parsley flakes . . . . .	.....	¼ cup . . . . .	.....	½ cup . . . . .	.....
Garlic powder . . . . .	.....	2 Tbsp . . . . .	.....	¼ cup . . . . .	.....
Canned liquid pack whole-kernel corn, drained . . .	1 lb 1½ oz .	¼ No. 10 can	2 lb 3 oz . .	½ No. 10 can	3. Add corn, carrots, green beans, and green peas. (Frozen vegetables may be combined with canned vegetables.)
OR	OR	OR	OR	OR	.....
Frozen whole-kernel corn .	1 lb 1½ oz .	¾ cups	2 lb 3 oz . .	1 qt 2¼ cups .	.....
Canned diced carrots, drained	1 lb 2 oz . .	¼ No. 10 can	2 lb 4 oz . .	½ No. 10 can	.....
OR	OR	OR	OR	OR	.....
Frozen sliced carrots	1 lb 6 oz . .	1¼ qt	2 lb 12 oz . .	2½ qt	4. Cover and simmer for 15 minutes, or until vegetables are tender.
Canned cut green beans, drained	15 oz	¼ No. 10 can	1 lb 14 oz . .	½ No. 10 can	.....
OR	OR	OR	OR	OR	.....
Frozen cut green beans . .	15 oz	¾ cups	1 lb 14 oz . .	1¾ qt . . . . .	.....
Canned green peas, drained	1 lb 1½ oz .	¼ No. 10 can	2 lb 2½ oz .	½ No. 10 can	.....
OR	OR	OR	OR	OR	5. Pour into serving pans.
Frozen green peas	1 lb 4 oz . .	1 qt	2 lb 8 oz . .	2 qt . . . . .	.....
						6. Portion with 8-oz ladle (1 cup).

SERVING: 1 cup (8-ounce ladle) provides ½ cup of vegetable.

YIELD: 50 servings: about 3¼ gallons
100 servings: about 6½ gallons

*See marketing guide on back.

(Continued on back)

Ingredients

Ingredients are listed in the form in which they are to be used in the recipe. For convenience, they are also listed in the order of use during preparation. Horizontal lines separate ingredients used together in a single step.

All the foods listed in the recipes can be purchased on the local market. The recipes will be equally successful whether USDA-donated commodity foods or commercially available ingredients are used. Where possible, the recipes have been developed and standardized using such USDA-donated commodities as ground beef (with no more than 24 percent fat), all-purpose flour, oil, shortening, and noninstant nonfat dry milk.

Alternative Ingredients

Alternative ingredients are sometimes given as a choice you can use in place of a similar ingredient, to increase versatility of a recipe or to save labor or money.

Examples of alternative ingredients are: dehydrated onions OR fresh onions; canned dry beans OR cooked dry beans; canned cut green beans, drained, OR frozen cut green beans. Alternative ingredients are listed on separate lines separated by the word "OR" so that it is clear that you must choose one or the other ingredient. *Do not* add both forms of the alternative ingredients.

Optional Ingredients

Some recipes include optional ingredients, typically for seasoning and garnishing. An optional ingredient may be preferred by students in some regions of the country, but not in others. The word "(optional)" immediately follows the ingredient in the recipe. Optional ingredients are not included in crediting the food item toward meeting meal pattern requirements and can be omitted from the recipe without affecting credit or quality.

Chili Con Carne With Beans

Meat/Meat Alternate-Vegetable

Main Dishes D-20

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
Raw ground beef (no more than 24% fat)	7 lb	14 lb	1. Brown ground beef. Drain.
Dehydrated onions	2 oz	½ cup 1 Tbsp	4 oz	1 cup 2 Tbsp	2. Add onions, garlic powder, green pepper (optional), pepper, and seasonings. Cook for 5 minutes.
OR	OR	OR	OR	OR	.....
*Fresh onions, chopped ...	1 lb	2½ cups	2 lb	5½ cups .....	.....
Garlic powder .....	.....	1 Tbsp 1½ tsp	.....	3 Tbsp .....	.....
Green pepper, chopped (optional)	8 oz	1½ cups	1 lb	3 cups .....	.....
Black pepper .....	.....	2 tsp .....	.....	1 Tbsp 1 tsp	.....
†Seasonings	3. Stir in tomatoes, water, and tomato paste; mix well. Bring to boil. Reduce heat. Cover. Simmer slowly, stirring occasionally until thickened, about 40 minutes.
Chili powder .....	.....	3 Tbsp .....	.....	¼ cup 2 Tbsp	.....
Paprika .....	.....	1 Tbsp .....	.....	2 Tbsp .....	.....
Onion powder .....	.....	1 Tbsp .....	.....	2 Tbsp .....	.....
Ground cumin .....	.....	2 Tbsp	2 oz	¼ cup .....	.....
Canned tomatoes, with liquid, chopped	3 lb 3 oz ...	½ No. 10 can	6 lb 6 oz ...	1 No. 10 can	4. Stir in beans. Cover and simmer about 10 minutes or until hot.
Water .....	.....	2¼ qt .....	.....	1 gal 2 cups ..	.....
Tomato paste	1 lb 12 oz ..	¼ No. 10 can	3 lb 8 oz ...	½ No. 10 can	.....
Canned pinto or kidney beans, drained	3 lb 6 oz ...	½ No. 10 can	6 lb 12 oz ..	1 No. 10 can	.....
OR	OR	OR	OR	OR	.....
*Cooked dry pinto or kidney beans (see preparation note)	2 lb 1 oz ...	1 qt 1½ cups	4 lb 2 oz ...	2¾ qt .....	.....
Cheddar cheese, shredded (optional)	1 lb 8 oz ...	1¾ qt	3 lb	3½ qt	5. Pour into serving pans.
						6. Portion with 4-oz ladle (½ cup). Garnish with cheese (optional).

SERVING: ½ cup (4-ounce ladle) provides 2 ounces of cooked lean meat and 3/8 cup of vegetable.

YIELD: 50 servings: about 1½ gallons
100 servings: about 3 gallons

*See marketing guide on back.

†Mexican Seasoning Mix (see G-1, Sauces, Gravies, and Seasoning Mixes) may be used to replace these ingredients. For 50 servings, use ½ cup 1 Tbsp 2 tsp Mexican Seasoning Mix. For 100 servings, use ¾ cup 2 Tbsp Mexican Seasoning Mix.

Chili Con Carne With Beans (Continued)

Main Dishes D-20

PREPARATION NOTE:

SOAKING BEANS

Overnight method: Add 1¾ qt cold water to every lb of dry beans. Cover. Let stand overnight in refrigerator.

Quick-soak method: Boil 1¾ qt of water for each lb of dry beans. Pour beans in and boil for 2 minutes. Remove from heat and allow to soak for 1 hour.

COOKING BEANS

Once the beans have been soaked, add ½ tsp salt for every lb of dry beans. Boil gently with lid tilted until tender, about 2 hours.

1 lb dry beans = about 2½ cups dry or 6¼ cups cooked beans.

Variation

a. Chili Con Carne Without Beans

50 servings: In step 1, use 8 lb 10 oz raw ground beef. Continue with steps 2 and 3. In step 4, omit pinto or kidney beans. Continue with steps 5 and 6.

100 servings: In step 1, use 17 lb 4 oz raw ground beef. Continue with steps 2 and 3. In step 4, omit pinto or kidney beans. Continue with steps 5 and 6.

Nutrients Per Serving

Calories	212	Vitamin A	81 RE/785 IU	Iron	3.0 mg
Protein	16 g	Vitamin C	11.6 mg	Calcium	40 mg
Carbohydrate	15 g	Thiamin	0.12 mg	Phosphorus	174 mg
Fat	10 g	Riboflavin	0.17 mg	Potassium	541 mg
Cholesterol	40 mg	Niacin	3.43 mg	Sodium	101 mg

Marketing Guide for Selected Items

Chili Con Carne With Beans

Food as Purchased	For 50-Serving Recipe	For 100-Serving Recipe	For _____ Serving Recipe
Mature onions	1 lb 2 oz	2 lb 4 oz. ...	.....
Green peppers	10¼ oz	1 lb 4½ oz ..	.....
Pinto or kidney beans, dry	14 oz	1 lb 12 oz ...	.....

Chili Con Carne Without Beans

Food as Purchased	For 50-Serving Recipe	For 100-Serving Recipe	For _____ Serving Recipe
Mature onions	1 lb 2 oz	2 lb 4 oz. ...	.....
Green peppers	10¼ oz	1 lb 4½ oz ..	.....

An example of an optional ingredient is cheddar cheese as a garnish in "Chili Con Carne With Beans," D-20. Another example is "Sweet Potato-

Prune Bread," B-18, where both chopped walnuts and nutmeg are optional ingredients (see illustration on page 13).

Weights and Measures for 50 and 100 Servings

In most cases, the quantity of each ingredient is given in both weight and volume measures for both 50 and 100 servings. This flexibility is in response to requests from local school food service professionals. Schools today are offering more choices in menu items and are doing “small batch” cooking where possible. As a result, recipe sizes for both 50 and 100 portions will be especially useful to many school systems.

Other recipes such as sauces and gravies are standardized for quantities of ½ gallon and 1 gallon. Most sauces, gravies, and dressings are considered “extra” foods, adding only to the attractiveness and acceptability of lunches.

Salad dressings and dips are given in quantities of 1 quart and 1 gallon. The assumed serving size is 1 fluid ounce (2 tablespoons). Schools allowing free access to dressings through self-service bars can expect some students to take larger portions, and may need to expand the recipe.

Measures By Weight and Volume

Weight measurements are preferred for measuring dry and solid ingredients. Dry ingredients such as flour, sugar, and dry milk should be weighed since packing can occur when using a volume-measuring device. **a** Shortening may form air pockets when packed into a volume measure, resulting in an inaccurate measure. It, too, is best measured by weight. **b** Weight measurements include ounces (oz) and pounds (lb).

However, since it may sometimes be necessary for a cook to use a volume measure for dry or solid ingredients, the volume measure is also given in the recipes.

Volume measurements are used for liquid ingredients. When an ingredient is a liquid, only the volume measure is given. **c** Volume measures include teaspoon (tsp), tablespoon (Tbsp), cup (cup), quart (qt), and gallon (gal).

Spices, flavorings, or other ingredients in amounts of 2 ounces or less are measured by volume **d** (teaspoons, tablespoons, parts of a cup) since most kitchen scales are not accurate enough to measure such small amounts.

Where volume measure is inappropriate, the count of an ingredient is given. For example, eggs are listed by count and weight.

Where appropriate, can sizes are listed for ease of measurement. For example: “Canned sweet pota-

toes, drained: ½ No. 10 can for 50 servings or 1 No. 10 can for 100 servings.” Where No. 10 cans are listed, the weight of the ingredient is also given.

“Weighing and Measuring Ingredients,” A-7, in the General Information section, provides additional information. Success in preparing consistently high quality food largely depends on good weighing and measuring techniques.

For ____ Servings

It is unlikely that you will prepare exactly 50 or 100 servings of a recipe. The “For ____ Servings” column **e** is included for you to note quantities of ingredients to fit your production needs. Having a second person check the mathematical calculations is always a smart idea. For additional information, refer to General Information pages “Recipe Adjustment—Method 1 (Factor Method),” A-10, or “Recipe Adjustment—Method 2 (Conversion Chart),” A-13.

Directions

Directions for combining ingredients are numbered in step fashion. Closely related procedures are grouped together in one step. Thin horizontal lines separate each step and also separate the ingredients needed for each step. The new 8-1/2”x11” format provides ample space for detailed directions.

Mixing speeds and times, cooking procedures, baking times and temperatures, panning instructions, portioning directions, and garnishing suggestions are given to simplify preparation and serving. When appropriate, a description of the condition or appearance of the product at various stages of preparation is included. For example: “Batter will be lumpy,” “bake until lightly browned,” or “mixture will be very thick.”

Remember that proper assembly and portioning are critical to serving foods that meet meal pattern requirements. Both the weight and volume measure of batters, dough, or mixtures to be placed or poured into each specified size pan are given when appropriate to insure that recipes that contribute to meal pattern requirements will provide the stated contribution per serving. The proper pan fill is important for proper crediting, cooking time, and temperature, and prevents guesswork in serving. It is also helpful in achieving product quality and in controlling food costs. If spacing of food products in a baking pan is important to the success of the finished product, this information is also given in the directions. For example: “Rolls,” B-16, indicates, “Place rolls on lightly oiled sheet pans (18”x26”x1”) in rows of 10 down and 5 across.”

Sweet Potato-Prune Bread Squares

Vegetable/Fruit-Bread

Bread and Cereal Products B-18

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
Canned sweet potatoes, drained	2 lb 3½ oz.	½ No. 10 can	4 lb 7 oz...	1 No. 10 can	1. Mash drained sweet potatoes. Set aside for step 4.
All-purpose flour	1 lb 12 oz..	1 qt 2¼ cups .	3 lb 8 oz...	3 qt ½ cup...	2. Blend flour, sugar, dry milk, baking powder, baking soda, salt, allspice, nutmeg (optional), and cloves for 1 minute in mixer on low speed.
Sugar	1 lb 1 oz...	2½ cups	2 lb 2 oz...	1¼ qt .....	.....
Noninstant, nonfat dry milk		2 Tbsp		¼ cup .....	.....
OR		OR		OR		
Instant nonfat dry milk		¼ cup		½ cup .....	.....
Baking powder		2 Tbsp		¼ cup	3. Combine eggs and water. Add shortening and liquid mixture to dry ingredients. Blend for 1 minute on low speed. Beat for 1 minute on medium speed.
Baking soda		1 tsp		2 tsp .....	.....
Salt		1 tsp		2 tsp .....	.....
Allspice		1 tsp		2 tsp .....	.....
Ground nutmeg (optional)		1 tsp		2 tsp .....	.....
Ground cloves		1 tsp		2 tsp	4. Add mashed sweet potatoes, prunes or raisins, and nuts (optional). Blend for 30 seconds on low speed. Beat for 1 minute on medium speed. DO NOT OVERMIX. Batter will be lumpy.
Large eggs (see note)	7 oz	4	14 oz	8 .....	.....
Water		1¼ cups		2½ cups .....	.....
Shortening	6½ oz	1 cup	13 oz	2 cups	5. Pour 6 lb 14 oz (3¼ qt) batter into each steamtable pan (12"x20"x2½"), which has been lightly greased. For 50 servings, use 1 steamtable pan. For 100 servings, use 2 steamtable pans.
Uncooked prunes, chopped	6½ oz	1¼ cups	13 oz	2½ cups .....	.....
OR	OR	OR	OR	OR		
Raisins, plumped	4¾ oz	¾ cup	9½ oz	1½ cups .....	.....
Chopped walnuts (optional)	6½ oz	1½ cups	13 oz	3 cups .....	.....

†To plump raisins, cover the fruit with very hot tap water. Soak 2-5 minutes. DO NOT OVERSOAK. Drain well before using.

Sweet Potato-Prune Bread Squares (Continued)

Bread and Cereal Products B-18

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
						6. Bake: Conventional oven: 350 °F for 55-65 minutes Convection oven: 300 °F for 35-45 minutes
						7. Cool. Cut each pan 5x10 (50 pieces per pan).
						For Loaf Pans: Pour 2 lb 4 oz (1½ qt) batter into each loaf pan (4"x10"x4"), which has been lightly greased. For 50 servings, use 3 loaf pans. For 100 servings, use 6 loaf pans.
						Bake: Conventional oven: 350 °F for 1¼-1½ hours Convection oven: 300 °F for 40-50 minutes Remove from pans. Cool completely. Cut each loaf into 17 slices, about ½" thick.

SERVING: 1 piece provides ⅛ cup of vegetable and fruit and 1 serving of bread.

YIELD: 50 servings: 1 steamtable pan
100 servings: 2 steamtable pans

NOTE:

50 servings: Use 2 oz (⅔ cup) dried whole eggs and ⅔ cup water in place of shell eggs.

100 servings: Use 4 oz (1⅓ cups) dried whole eggs and 1⅓ cups water in place of shell eggs.

Nutrients Per Serving

Calories	162	Vitamin A	152 RE/1,116 IU	Iron	0.8 mg
Protein	3 g	Vitamin C	2.0 mg	Calcium	23 mg
Carbohydrate	28 g	Thiamin	0.11 mg	Phosphorus	44 mg
Fat	4 g	Riboflavin	0.08 mg	Potassium	80 mg
Cholesterol	22 mg	Niacin	0.92 mg	Sodium	135 mg

For oven-baked products the recipes include the time and temperature for both convection and conventional ovens. Convection ovens have high-speed blowers that circulate the heated air around the food in the oven. A convection oven temperature is generally lower and the cooking time is generally shorter than for the same food baked in a conventional oven. Both kinds of ovens were used in standardizing the recipes to determine the best times and temperatures for baked products.

NOTE: The recipes were standardized at sea level. Adjustments may be necessary when preparing at high altitudes.

Serving

The SERVING statement at the end of a recipe, in the lower left-hand corner, describes the amount or size of prepared food to make one serving. In most recipes, the serving makes a contribution to the school lunch meal pattern. For example: "Vegetable Soup," H-4, reads that a SERVING of "1 cup (8-ounce ladle) provides 1/2 cup of vegetable." (See illustration on page 10.)

When a portion is stated as "1 piece," such as in "Lasagna," D-25, the portion size is indicated in the panning and cutting directions. SERVING indicates that "1 piece provides the equivalent of 2 ounces of cooked lean meat, 3/8 cup of vegetable, and 3/4 serving of bread alternate." *Remember, the stated contribution to the school lunch meal patterns is based on exactly following both the recipe and the stated portion size. (Food Buying Guide for Child Nutrition Programs, PA-1331, is the basis for computing credit toward meeting school lunch meal pattern requirements.)*

Yield

Total yields are given at the end of a recipe in the lower right-hand corner, in gallons, dozens, loaves, number of pans, or other appropriate units. Yield information is helpful when planning for equipment use, particularly of steamtable pans and sheet pans. This information is also helpful in planning for holding food before service.

Nutrients Per Serving

Many food service personnel are interested in the nutritional value of foods served to students. Nutrient information is now provided in a chart following each basic recipe. Calories and the amount of protein, carbohydrate, and fat supplying the calories are included. Five vitamins, five minerals, and cholesterol are listed.

You will notice that Vitamin A is reported in two different units: International Units (IU), commonly used in the past as a measure of Vitamin A, and Retinol Equivalents (RE), the units currently used by the Food and Nutrition Board of the National Academy of Sciences. General Information page A-4, "Nutritive Value of a Serving of Food," contains detailed information about the nutrient calculations.

Remember, however, that a meal is a combination of many food items. A well-balanced diet is achieved only through thoughtful menu planning. The *Menu Planning Guide for School Food Service, PA-1260*, contains a wealth of information that will help managers plan menus that are acceptable to students, are high in nutrition, and meet the school lunch meal pattern requirements.

Variations

A variation is an alteration of a basic recipe that has had one or more ingredients replaced, added, or deleted. For example: "Rolls (Yeast)," B-16, uses only all-purpose flour in the basic recipe. Variation B-16c, "Wheat Rolls," substitutes a portion of the all-purpose flour with whole-wheat flour.

If a recipe has a variation, those directions follow the basic recipe under the heading "Variation." Directions are written so that only the replacements, additions, or deletions are indicated. Information in the basic recipe that does not change is not repeated in the variation directions. All variations have been thoroughly tested and standardized through the same process as the basic recipe to assure product quality and yield.

Rolls (Yeast)

Bread

Bread and Cereal Products B-16

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
Active dry yeast (see note)		1/3 cup	3 1/4 oz	1/2 cup 2 Tbsp		For best results, have all ingredients and utensils at room temperature. 1. Dissolve dry yeast in warm water. Let stand for 4-5 minutes.
Water, warm (110 °F)		1 1/2 cups		3 cups		
All-purpose or bread flour	3 lb 10 oz ..	3 1/4 qt	7 lb 4 oz ..	6 1/2 qt		2. Place all dry ingredients (flour, dry milk, sugar, and salt) in mixer bowl. Using a dough hook, blend on low speed for approximately 2 minutes.
Noninstant, nonfat dry milk	3 1/4 oz	2/3 cup	6 1/2 oz	1 1/3 cups		
OR	OR	OR	OR	OR		
Instant nonfat dry milk ...	3 1/4 oz	1 1/3 cups	6 1/2 oz	2 3/4 cups		
Sugar	5 3/4 oz	3/4 cup 2 Tbsp	11 1/2 oz	1 1/2 cups 2 Tbsp		
Salt		2 Tbsp	2 1/2 oz	1/4 cup		
Vegetable oil		3/4 cup 2 Tbsp		1 1/3 cups		3. Add oil and blend on low speed for approximately 2 minutes.
Water (68 °F)		2 1/2 cups		1 1/4 qt		4. Add water. Mix on low speed for 1 minute.
						5. Add dissolved yeast and mix on low speed for 2 minutes.
						6. Knead dough on medium speed for 8 minutes, or until dough is smooth and elastic.
						7. Place dough in warm area (about 90 °F) for 45-60 minutes.
						8. Punch down dough to remove air bubbles.
						9. Form rolls from dough by pinching off 2-oz pieces and shaping. Place rolls on lightly oiled sheet pans (18" x 26" x 1") in rows of 10 down and 5 across. For 50 servings, use 1 pan. For 100 servings, use 2 pans.
						10. Place in a warm area (about 90 °F) until double in size, 30-50 minutes.
						11. Bake until lightly browned: Conventional oven: 400 °F for 18-20 minutes. Convection oven: 350 °F for 12-14 minutes.
Butter or margarine, melted (optional)		1 Tbsp		2 Tbsp		12. Optional: Brush lightly with melted butter or margarine (approximately 1 Tbsp per pan) while warm.

SERVING: 1 2-ounce roll provides 2 servings of bread.

YIELD: 50 servings: about 50 2-ounce rolls
100 servings: about 100 2-ounce rolls

NOTE: To use high-activity (instant) yeast, follow directions below or manufacturer's instructions.

50 servings: Omit step 1. In step 2, add 1/4 cup high-activity (instant) yeast. Continue with step 3. In step 4, add 1 qt water (110 °F). Omit step 5. In step 6, knead for 10 minutes. Continue with steps 7-12.

100 servings: Omit step 1. In step 2, add 2 1/2 oz (1/2 cup) high-activity (instant) yeast. Continue with step 3. In step 4, add 2 qt water (110 °F). Omit step 5. In step 6, knead for 10 minutes. Continue with steps 7-12.

Variations

a. Frankfurter Rolls

50 and 100 servings: Follow steps 1-8. In step 9, shape 2-oz pieces of dough to approximately 2 1/2" x 6 1/2". Place rolls on lightly oiled sheet pans in rows of 8 down and 4 across. Continue with steps 10-12.

b. Hamburger Rolls

50 and 100 servings: Follow steps 1-8. In step 9, shape and flatten 2-oz pieces of dough to approximately 4" in diameter. Place rolls on lightly oiled sheet pans in rows of 6 down and 4 across. Continue with steps 10-12.

c. Wheat Rolls

50 servings: Follow step 1. In step 2, use 1 lb 13 oz (1 qt 2 1/2 cups) all-purpose or bread flour and 1 lb 13 oz (1 qt 2 3/4 cups) whole-wheat flour. Continue with steps 3-12.

100 servings: Follow step 1. In step 2, use 3 lb 10 oz (3 1/4 qt) all-purpose or bread flour and 3 lb 10 oz (3 qt 1 1/2 cups) whole-wheat flour. Continue with steps 3-12.

Nutrients Per Serving

Calories _____	174	Vitamin A _____	0 RE/1 IU	Iron _____	1.1 mg
Protein _____	4 g	Vitamin C _____	0.1 mg	Calcium _____	31 mg
Carbohydrate _____	30 g	Thiamin _____	0.23 mg	Phosphorus _____	59 mg
Fat _____	4 g	Riboflavin _____	0.20 mg	Potassium _____	83 mg
Cholesterol _____	Tr	Niacin _____	2.09 mg	Sodium _____	283 mg

Chicken or Turkey Salad

Meat

Salads and Salad Dressings E-5

Ingredients	50 Servings		100 Servings		For _____ Servings	Directions
	Weight	Measure	Weight	Measure		
*Cooked chicken or turkey, chopped.....	6 lb 6 oz...	1¼ gal	12 lb 12 oz.	2½ gal	1. Combine chicken or turkey, celery, onions, pickle relish, pepper, and dry mustard. Add mayonnaise or salad dressing. Mix lightly until well blended.
*Celery, chopped.....	1 lb 5 oz...	1¼ qt	2 lb 10 oz..	2½ qt .....	.....
Dehydrated onions.....	.....	¼ cup 2 Tbsp	3 oz	¾ cup 2 Tbsp	.....
OR	OR	OR	OR	OR	.....
*Fresh onions, chopped ...	12 oz	2 cups	1 lb 8 oz...	1 qt .....	.....
Sweet pickle relish, undrained	15 oz	1¾ cups	1 lb 14 oz..	3½ cups .....	.....
Black or white pepper .....	.....	2 tsp .....	.....	1 Tbsp 1 tsp .	.....
Dry mustard .....	.....	1 Tbsp 1½ tsp	.....	3 Tbsp .....	.....
Mayonnaise or salad dressing.....	1 lb 9½ oz.	3¾ cups	3 lb 3 oz...	1 qt 2½ cups.	.....
						2. Cover. Refrigerate until ready to serve.
						3. Portion with No. 8 scoop (½ cup).
						4. Serve on salad greens or in sandwiches.

SERVING: ½ cup (No. 8 scoop) provides 2 ounces of cooked poultry.

YIELD: 50 servings: about 1¾ gallons
100 servings: about 3½ gallons

*See marketing guide below.

Nutrients Per Serving

Calories	223	Vitamin A	11 RE/93 IU	Iron	1.0 mg
Protein	16 g	Vitamin C	1.9 mg	Calcium	20 mg
Carbohydrate	5 g	Thiamin	0.04 mg	Phosphorus	99 mg
Fat	15 g	Riboflavin	0.10 mg	Potassium	176 mg
Cholesterol	57 mg	Niacin	3.60 mg	Sodium	194 mg

Marketing Guide for Selected Items

Food as Purchased	For 50-Serving Recipe	For 100-Serving Recipe	For _____ Serving Recipe
Chicken, whole, without neck and giblets	17 lb 12 oz ..	35 lb 8 oz ..	.....
OR	OR	OR	.....
Turkey, whole, without neck and giblets	13 lb 10 oz ..	27 lb 4 oz ..	.....
Celery	1 lb 9½ oz ..	3 lb 3 oz ..	.....
Mature onions	14 oz	1 lb 11½ oz..	.....

Marketing Guide for Selected Items

Some recipes call for ingredients that have a preparation loss or gain before they are ready to use in the recipe. The marketing guide will help the manager know how much of those particular ingredients is needed to provide the quantity called for in a recipe. Celery, lettuce, and fresh apples are some foods that have a preparation loss since the core, stem, and leaves are not ordinarily eaten. Rice and dry beans are some of the ingredients that have gains after cooking. The marketing guide includes a "For _____ Servings" column for you to calculate the amount to purchase for other than 50 or 100 servings.

In the ingredient list, there is an asterisk (*) immediately to the left of any ingredient for which there is marketing guide information. **a**

We Thought You Would Like To Know

This section of the guide answers questions you might ask when beginning to use the recipes.

1. Are dehydrated onions used as a dry ingredient, or must they be reconstituted before measuring or using?

Use dehydrated onions in the dry form. The weight and volume measures given for 50 and 100 servings are for *dry* onions. Add the dry onions directly to other ingredients according to directions. Moisture for reconstituting is included in the recipe. The dry onions provide the same amount of flavor, even though the weight and measure for the dry onions is less than for fresh ones.

2. Can I use frozen whole eggs or dehydrated eggs in place of shell eggs?

Frozen or reconstituted dry eggs can be substituted in most of the recipes *that are thoroughly cooked*. Be sure to read “Shell Eggs,” A-15, “Dried Eggs (Storing, Preparing, and Using),” A-16, and “Frozen Eggs (Storing, Thawing, and Using),” A-17, for more information about using eggs.

Remember that thawed frozen eggs and reconstituted dried eggs are highly perishable. They should be used only in thoroughly cooked products. Handle according to manufacturer’s directions.

The weight of frozen eggs to use in a recipe is the same as the weight for fresh eggs. If you need to know a volume measure, you will find instructions for calculating it in “Frozen Eggs (Storing, Thawing, and Using),” A-17.

Many recipes give directions for substituting and reconstituting dried eggs. In those recipes, the words “(see note)” appear immediately after the ingredient “Large eggs.” Refer to the NOTE at the end of the recipe for the specific amounts of dry eggs and water to use for 50 and 100 servings. (See illustration on page 13.)

3. How do I know if the amount of milk in a recipe is for dry milk or fluid milk?

If a recipe requires *fluid* milk, it will state “Reconstituted nonfat dry milk” and will list *only* the volume measure for the fluid milk.

Otherwise, the weight and volume measures given are for both *noninstant* nonfat *dry* milk and *instant* nonfat *dry* milk. For best results, dry milk should be weighed rather than measured. The recipes were standardized using USDA-donated noninstant, nonfat dry milk.

4. Is frozen juice used in the concentrated form or in the reconstituted form?

The same principle applies throughout the file. If an ingredient is to be reconstituted before it is measured and used as an ingredient, the recipe will clearly state “Reconstituted” before the ingredient name. An example is “Reconstituted frozen lemon juice concentrate” in the recipe “Orange-Pineapple Gelatin,” C-11.

5. Can I use high-activity instant yeast in place of active dry yeast?

Yes. In recipes using yeast there is a “(see note)” immediately following the words “Active dry yeast” in the ingredient listing. The NOTE at the end of the

recipe says, “follow directions below or manufacturer’s instructions.” (See illustration on page 15.) Directions give the amounts of high-activity instant yeast to substitute for 50 and 100 servings and any changes needed in preparation procedure. The high-activity instant yeast is added to other dry ingredients and the liquid needed is added in a later step.

6. What is Master Mix, and when can I use it?

Master Mix is a mixture of dry ingredients and shortening, blended in advance, that you can use in baked products without yeast. (See illustration on page 8.)

Four standardized recipes using Master Mix are included. They are listed as variations of basic “from scratch” recipes (B-4, B-5, B-12, and B-13). The Master Mix variations are shown on the Bread and Cereal Products contents page as follows:

Biscuits (Using Master Mix)	B-4a
Banana Bread Squares (Using Master Mix)	B-5a
Muffin Squares (Using Master Mix)	B-12a
Pancakes (Using Master Mix)	B-13a

If you prefer, these four baked products can also be made from scratch by using the basic recipes B-4, B-5, B-12, and B-13.

7. Why are raisins plumped in recipes, and how will I know when to do it?

Plumping raisins before adding them improves product quality since the dry raisins compete for the moisture in the recipe. Not all recipes require plumping of raisins. A “†” symbol before the words “Raisins, plumped” will indicate when plumping is necessary. The symbol “†” refers to a footnote explaining how to plump raisins. (See illustration on page 13.)

8. How will I know when to use the seasoning mixes described on page G-1?

Herbs and spices are incorporated into the recipes to reduce the need for added salt and to “wake up” student appetites. Two seasoning mixes, Mexican and Italian, have been created and are used throughout the file in appropriate recipes. (“Beef or Pork Taco, D-13,” “Beef or Pork Burrito,” D-12, “Chili Con Carne With Beans,” D-20, “Lasagna with Ground Beef, D-25,” “Stromboli,” F-6, and

“Spaghetti and Meat Sauce,” D-35, are some examples.) Recipes that allow use of seasoning mixes have the symbol “†” before the word “Seasonings” in the list of ingredients. This directs attention to the footnote indicating the amount of Seasoning Mix to use for 50 and 100 servings. (See illustration on page 11.) These recipes also list the amount to use of each seasoning, if you prefer to measure them individually.

Seasoning preferences are regional. Chili in the southwest might be “hotter” than chili in the northeast. You can adjust seasonings to please the tastes of your students. Student taste panels can help you decide acceptable levels of seasoning. For product quality and consistency, it is recommended that cooks follow the recipe exactly once the level of seasoning is set.

9. What herbs and spices are used in the new recipes?

Below is a list of seasonings used. Many are familiar to you. Others may be new and exciting to try.

Allspice	Ginger
Basil	Marjoram
Black Pepper	Nutmeg
Cayenne	Onion Powder
Chili Powder	Oregano
Cinnamon	Paprika
Cloves	Parsley Flakes
Cream of Tartar	Poultry Seasoning
Cumin	Thyme
Dry Mustard	White Pepper
Garlic Powder	

10. When beans are listed in a recipe, are they dry beans or cooked dry beans?

Most recipes using beans give the amounts for both *cooked* dry beans and canned beans. Canned bean measures are given by weight as well as in No. 10 cans. The symbol “*” before the words “Cooked dry beans” directs the user to the marketing guide for purchasing information about dry beans. The beans are to be measured, cooked, and then used as an ingredient. The words “(see preparation note)” immediately after the bean ingredient direct the user to “PREPARATION NOTE: SOAKING BEANS” at the end of the recipe. An overnight method and a quick-soak method are given. (See illustration on page 11.)

More information on cooking dry beans, peas, and lentils is given on instruction page D-1.

11. Should flour be sifted?

Do *not* sift flour before or after weighing or measuring. The recipes have been developed to mechanically incorporate air into the flour mixture early in the preparation process. Dry ingredients such as dry milk and baking powder are thoroughly mixed with the flour. Sifting is not necessary.

For best results, flour (like other dry ingredients) should be weighed rather than measured. Weighing gives the most accurate measure since volume-measuring devices can cause packing. However, if it is necessary to use a volume measure, do not use a measure larger than 1 quart because of the tendency of flour to pack.

12. Why do some recipes also list bread flour?

When listed as an alternate ingredient, bread flour can be used in yeast bread products. The recipes were standardized using USDA commodity all-purpose flour, which will result in excellent quality products. Wherever bread flour is listed as an alternate ingredient, it will yield an even better product with superior grain and texture, and increased volume.

13. Can I substitute commercially available ground beef (30 percent fat) for the USDA commodity ground beef (no more than 24 percent fat)?

The recipes were standardized with USDA commodity ground beef (no more than 24 percent fat). If ground beef with a higher percentage of fat is used, the yield will decrease since more fat is drained off. Also, the credit toward meeting meal pattern requirements will not be the same as stated on the recipe.

Refer to the *Food Buying Guide for Child Nutrition Programs*, PA-1331, when making substitutions.

How the Recipes Were Developed and Standardized

Most of the recipes were selected from recommendations made by the seven FNS regional offices and State education agencies that work directly with local schools. FNS nutritionists worked closely with a private food service consulting firm to develop and standardize the recipes.

The terms “develop” and “standardize” distinguish between two separate phases of creating and testing a recipe. Adjustments in ingredients and formulation

took place during the first developmental phase, until a food product was considered satisfactory in all its characteristics.

In the second, or standardization, phase the recipe was prepared at increasing quantities in exact proportions according to the directions. Standardization makes sure that the recipe continues to produce a quality product and consistent yield as the amount of product being prepared increases.

Because school food service must take so many factors into consideration, each recipe was carefully written after taking into account the following concerns:

Meal Pattern Regulations

- Contribution to meal pattern
- Meal pattern serving sizes
- Updated crediting

Food Product Concerns

- Student acceptability
- Serving size appropriateness
- Use of USDA commodities
- Ingredient cost and availability
- Moderate use of sugar, fat, and salt
- Product appearance
- Seasoning and garnishes

School Food Production/Procedures

- Preparation and serving time constraints
- Ease of measuring and preparing
- Work simplification
- Employee skill level
- Employee safety
- Sanitation
- Holding/transport qualities
- Storage and equipment limitations
- Portioning and serving procedures

Professionally trained chefs tested the draft recipes in an institutional test kitchen, under the supervision of a registered dietitian. A taste panel evaluated the products for taste, appearance, texture, and portion size.

Once a recipe formula and preparation were finalized and the taste panel approved product quality and acceptability, the recipe was prepared many times at increasing numbers of servings. Product quality was monitored by the taste panel and consistent yields were documented in extensive records kept by the chefs. Schools can use the new USDA recipes with confidence that product quality and yield have been thoroughly tested.

Recipe Acceptability

As already mentioned, a trained panel of experts in food quality evaluated and approved the recipes during development and standardization. In addition, FNS conducted a field test of selected recipes after they were standardized in the test kitchen. Recipes were tested in a variety of volunteer school kitchens for student acceptance and to be sure the recipes would meet the needs of schools across the country. The field test provided helpful information and gave FNS assurance that schools found the recipes a welcome addition in their kitchens.

